



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,431	10/18/2005	Yusuke Takahashi	19254	3768

7590 07/19/2011
Paul J Esatto Jr
Scully Scott Murphy & Presser
400 Garden City Plaza
Suite 300
Garden City, NY 11530

EXAMINER

DANIELS, ANTHONY J

ART UNIT	PAPER NUMBER
----------	--------------

2622

MAIL DATE	DELIVERY MODE
-----------	---------------

07/19/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,431	Applicant(s) TAKAHASHI ET AL.	
	Examiner ANTHONY J. DANIELS	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6 and 30-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-6 and 30-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/8/2011 has been entered.

Response to Arguments

Applicant's arguments regarding claims 3 and 30 and the Kinjo reference have been fully considered but they are not persuasive.

Applicant argues, "...Kinjo does not disclose or suggest using the time information to estimate a position of an object and identify the recognized object on a display, as recited in amended Claims 3, 30, 32, 36 and 38. Rather, the time information is provided by the moving object to the database organization so that when the subject of an image is identified as the moving object the position and time information can be transmitted to the camera, i.e. message sender, as information about the subject. (See: paragraph [0053]). Thus, the object's time information is provided to the camera only after the object has already been identified. Therefore, in Kinjo the time information cannot be used to estimate the position of an object in order to recognize whether or not the object is present in the captured video, and subsequently identify the recognized object on a display based on the time information." The examiner respectfully submits that Applicant's statement that the object must first be identified before time information

Art Unit: 2622

is provided is an inaccurate assessment of the Kinjo reference. Firstly, nowhere in the reference is this stated. Secondly, if the subject was already identified, there would be no need for Kinjo to be concerned with time information. It appears that the time information is absolutely necessary for proper subject identification in the case where the subject is moving. Accordingly, the examiner submits that the Kinjo reference discloses the feature of "...an identification means for identifying said object recognized as present in said captured video image based on a correlation of said positional information of said object and the time information with known objects."

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 3 recites, "...estimating means for estimating a position of an object in a captured video image from positional information within said captured image of said object...". The specification does not clearly distinguish between the estimated position of an object within an image and positional information within said captured image of said object. Figure 9 shows the position of a candidate object in the form of image space coordinates. However, this is only one

Art Unit: 2622

form of positional information from within a captured image of said object. It is unclear how or if this information is used to estimate the position of the object and what form or dimension this estimated position takes or has.

Claim 3 also recites, "...estimating means for estimating a position of an object in a captured video image from...image capturing information including time information. The examiner submits that the estimated position is not determined using time information. The specification states on p. 17, lines 24-26 that the image capturing information [which is used to estimate the object position] includes date and time information which is information identifying the date and time on which a video image is captured. However, this time information doesn't assist in indicating an area where an image will be captured. The specification further states, "An object that moves with time, such as a train or the like, cannot be identified by positional information only. However, if the position of such an object can be identified at each time by a diagram or the like, then the object may be identified by a combinatorial set representing a combination of time and positional information." It appears from this passage that the identification means uses time information in its correlation not the estimating means in its estimation.

Claim 30 is a method claim corresponding to apparatus claim 3. It is rejected for reasons similar to those discussed above.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

Art Unit: 2622

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 3-6 and 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al. (US # 6,222,583) in view of Seo (US # 6,014,608) and further in view of Kinjo (US 2002/0113872).

As to claim **3**, Matsumura et al. teaches a video image object recognizing apparatus (Figure 1) comprising: estimating means for estimating a position of an object from positional information within said captured video image of said object (Figure 10, CG image) and image capturing information including information for determining an area where an image will be captured (Figure 4, "Camera Angle" and "Focal Distance"), and recognition means for recognizing whether said object is present or not using a difference between visual feature quantities of a partial video image of said captured video image and said object and a difference between the position of said partial video image and said estimated position (Col. 13, Lines 32-42); and identification means for identifying said object recognized as present in said captured video image based on a correlation of said positional information of said object with known

Art Unit: 2622

objects (Figure 15, steps 32 and 33). The claim differs from Matsumura et al. in that it further requires (1) that the estimating means estimates the position of an object in a captured video image from moving speed information of a video input unit providing the captured video image, (2) that the image capturing information include time information and (3) that the identification means for identifying said object recognized as present in said captured video image based on a correlation of said positional information of said object and the time information with known objects.

In the same field of endeavor, Seo discloses a navigation apparatus (Figure 1) employed in a vehicle (Col. 3, Lines 51-55). The apparatus calculates a position of the vehicle and uses this position information to access a map information about the vehicle's current position. When calculating the current position, the system uses GPS information as well as speed information about the vehicle (1) (Col. 3, Line 66 – Col. 4, Line 35; *{Matsumura et al. discloses in the Conventional Art section of the disclosure a navigational system similar to the endeavor of the main invention which is utilized in a vehicle. Matsumura et al. does not explicitly disclose that the main invention is implemented in a vehicle. However, navigation systems are most commonly used in vehicles. With the addition of Seo, Matsumura's invention is essentially used in the vehicle of Seo, where the speed of the vehicle; and hence, the camera of Matsumura et al. is used to estimate the position.}*). In light of the teaching of Seo, it would have been obvious to one of ordinary skill in the art utilize the speed information of the camera (on the vehicle) in Matsumura et al. in order to access the map information, because an artisan of ordinary skill in the art would recognize that this would allow the system of Matsumura et al. to attain a position of a landmark or geographic site with a higher degree of accuracy.

Art Unit: 2622

Further in the same field of endeavor, Kinjo teaches an information transmitting system (Figure 1) including an object identifying unit (Figure 1, object identifying unit “32”) which, from transmitted GPS information and shooting direction information of a camera (Figure 1, camera “10”), can identify an object in the image ([0030]-[0033]). The system also has the ability to identify moving subjects in an image. In this situation, the camera must transmit positional data and time data to the object identifying unit in order properly identify the object (2) (3) ([0049]). In light of the teaching of Kinjo, it would have been obvious to one of ordinary skill in the art to include time information along with the image capturing, positional information and moving speed information to identify the sights of Matsumura et al., as modified by Seo, because an artisan of ordinary skill in the art would recognize that this would increase the versatility of the system of Matsumura et al. by including the ability to label moving objects rather than just static landmarks.

As to claim 4, Matsumura et al., as modified by Seo and Kinjo, teaches a video image object recognizing apparatus according to claim 3, wherein a probability distribution of an error of said image capturing information is reflected in a probability distribution that an object is present in recognizing whether said object is present or not (*The probability distribution of an error in the image capturing information is interpreted to be 0% - 100%. Also, the probability distribution that an object is present is 0% - 100%. Thus, the probability distribution of the error is reflected (i.e. the same as) in the probability distribution that an object is present.*).

As to claim 5, Matsumura et al., as modified by Seo and Kinjo, teaches a video image object recognizing apparatus according to claim 4, wherein the probability distribution that an object is present is employed as the difference between the position of said partial video image

Art Unit: 2622

and said estimated position (*The examiner submits that the difference between the position of said partial video image and said estimated position would inherently involve a probability distribution.*).

As to claim **6**, Matsumura et al., as modified by Seo and Kinjo, teaches a video image object recognizing apparatus according to claim 5, wherein a normal distribution of a variance of an error of said image capturing information is employed as said probability distribution (*Similar to claim 5, a probability distribution would inherently involve a normal distribution of a variance of the error.*).

As to claims **30-35**, claims 30-35 are method claims corresponding to the apparatus claims 1-5, respectively. Therefore, claims 30-35 are analyzed and rejected as previously discussed with respect to claims 1-6, respectively.

As to claims **36-41**, in light of the passages of Matsumura et al. discussing computer generation ("CG") and the cited passages of Matsumura et al. discussed in claims 1-6, claims 36-41 are analyzed and rejected as previously discussed in claims 1-6, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. DANIELS whose telephone number is (571)272-7362. The examiner can normally be reached on 8:00 A.M. - 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANTHONY J DANIELS/
Examiner, Art Unit 2622

7/18/2011